

PVM-1220

ADJUSTMENT MANUAL

US Model
Canadian Model



November, 1982

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


TRINITRON®
COLOR VIDEO MONITOR
SONY®

MON

1. GENERAL

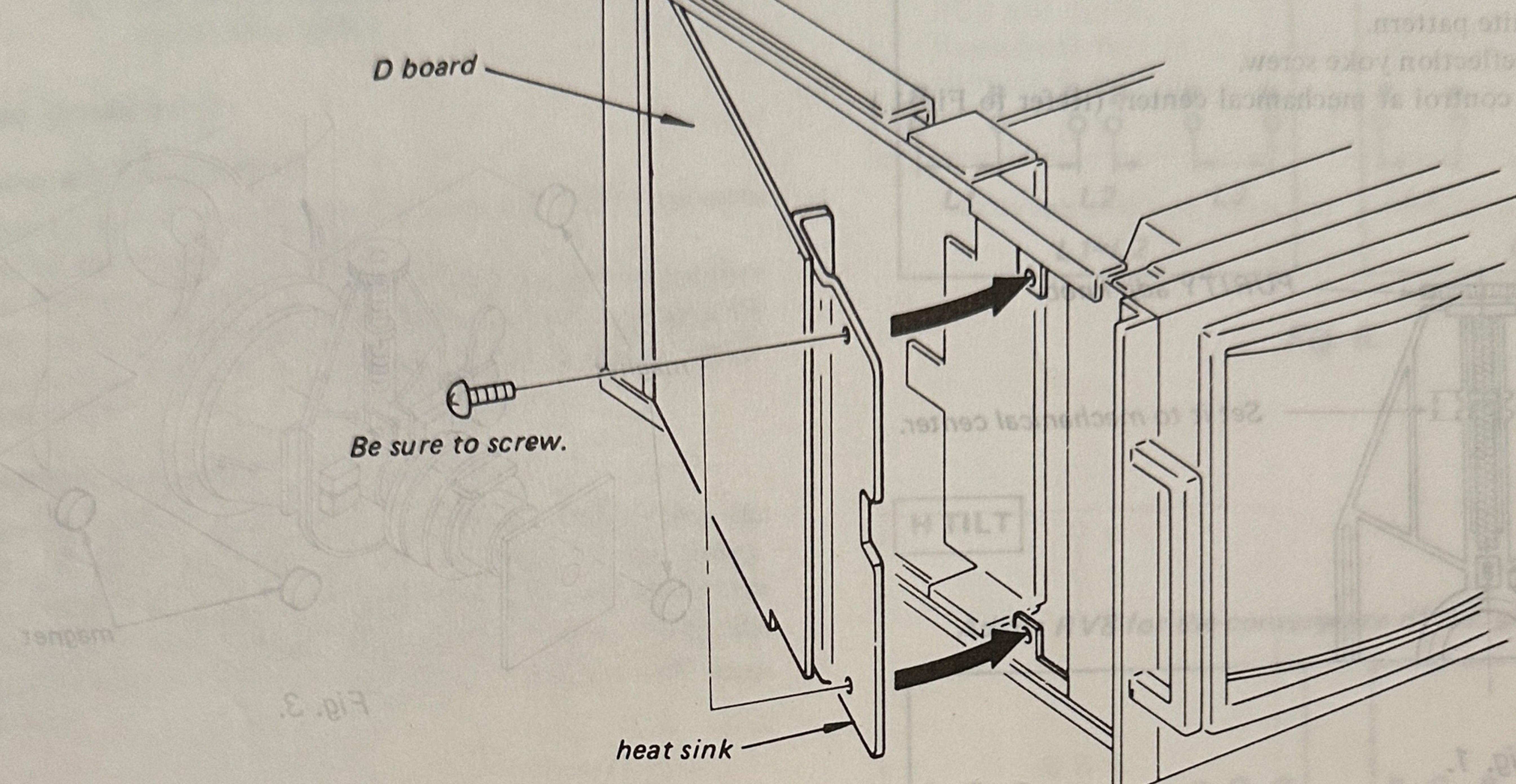
1-1. LOCATION AND FUNCTION OF CONTROLS



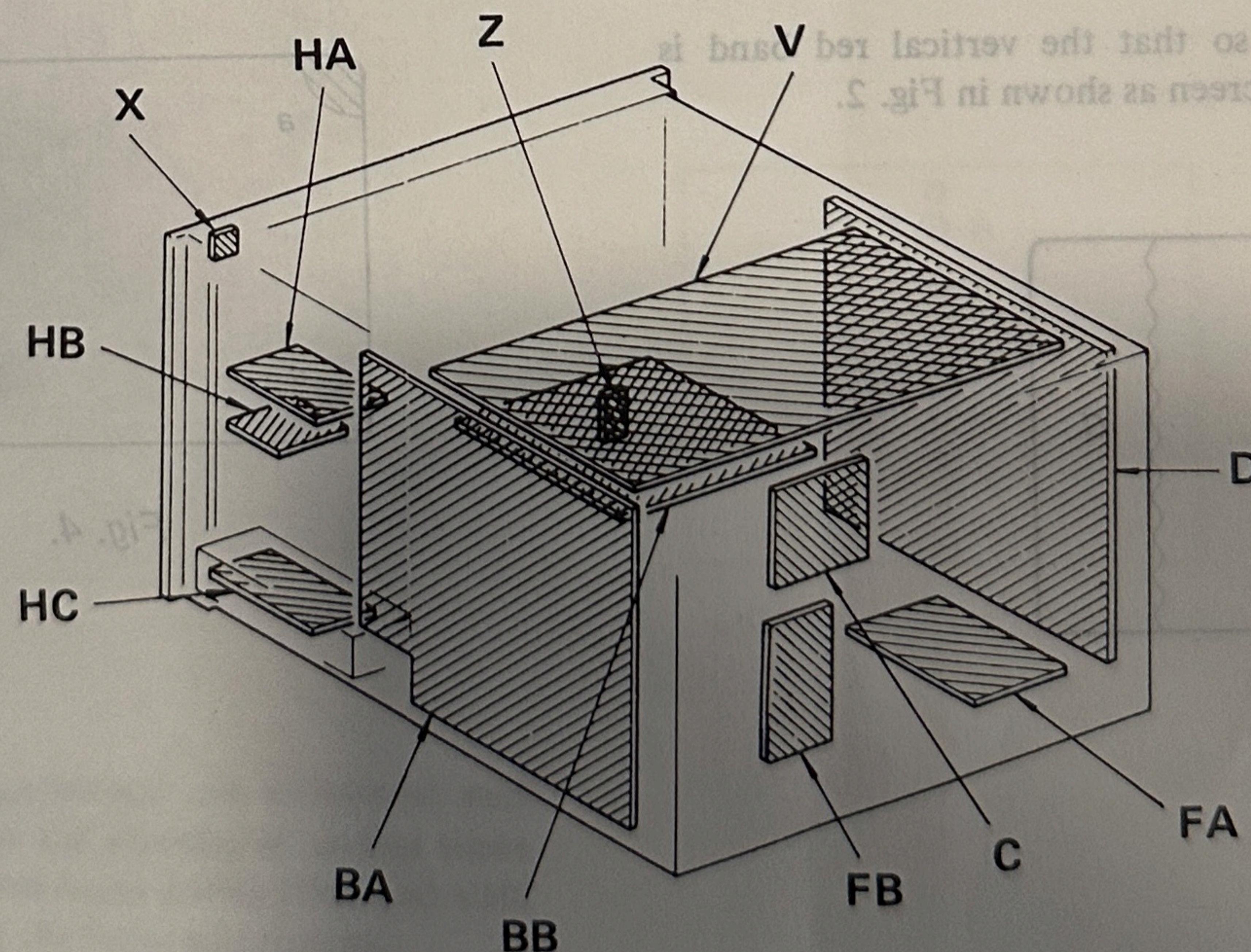
1-2. DISASSEMBLY

CAUTION

Be sure to perform that heat sink of D board is screwed to chassis before power switch is turned on. If not, earth loop of deflection circuit is changed, characteristic is changed.



1-3. CIRCUIT BOARDS LOCATION



2. BASIC ADJUSTMENT

When replacing the CRT, perform the adjustments as described below.

Test Equipment Required

1. Color Pattern Generator
2. Degausser

2-1. BEAM LANDING ADJUSTMENT

Preparation: 1. Place the set in the eastern or western direction.
2. Degauss the entire screen.

1. Feed in the white pattern.
2. Unfasten the deflection yoke screw.
3. Set the purity control at mechanical center. (Refer to Fig. 1.)

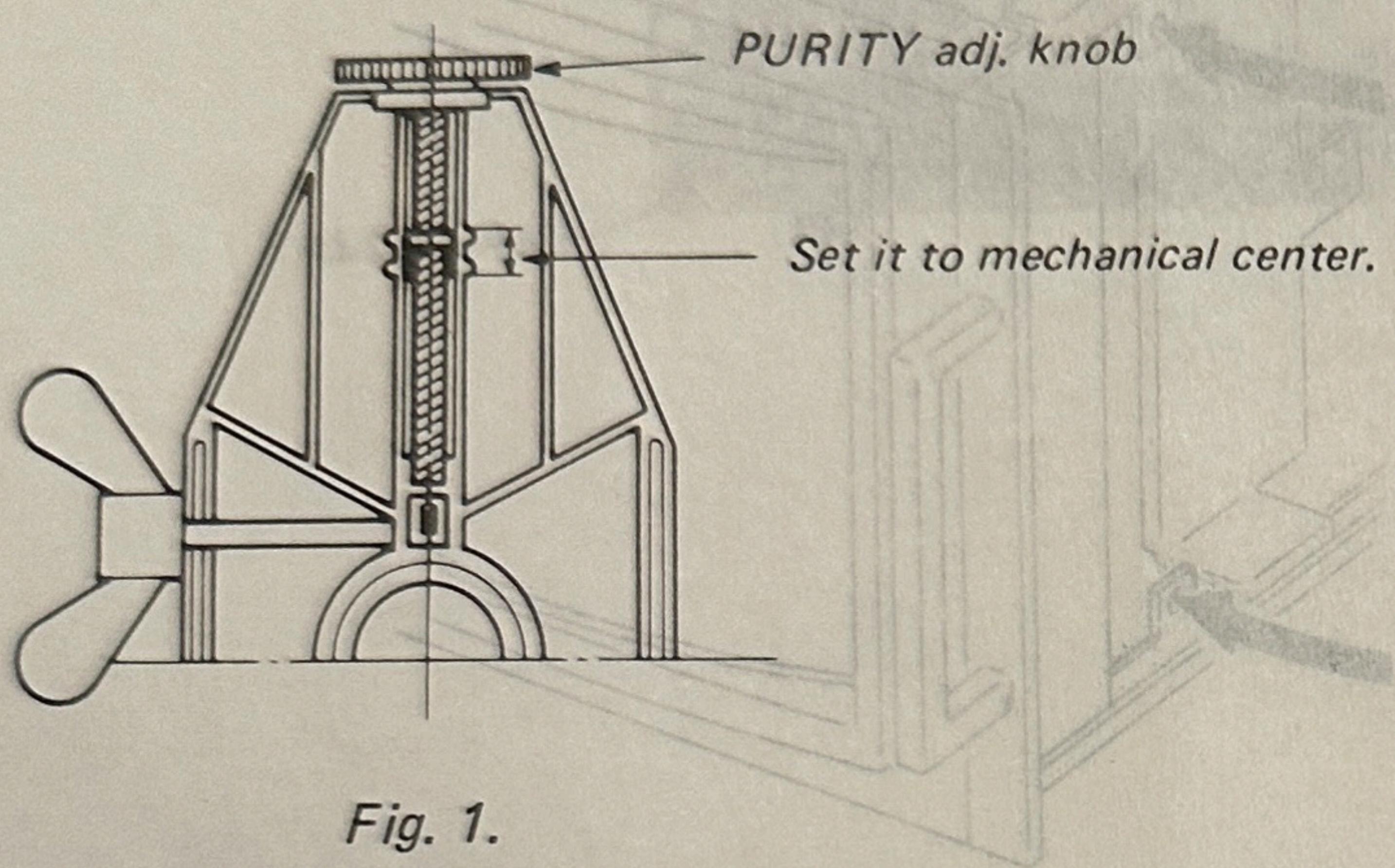


Fig. 1.

7. Slide the deflection yoke back for a uniform red raster.
8. Check the green and blue rasters for uniformity by performing the same way as Steps 5, 6 and 1.
9. Adjust the tilt of the deflection yoke and tighten the deflection yoke fixing screw. (Feed in the crosshatch pattern.)

- If mislanding appears at corners of the screen.
 1. Affix the magnets from the funnel side on the periphery of the deflection yoke at which the mislanding is observed, as shown in Fig. 4.

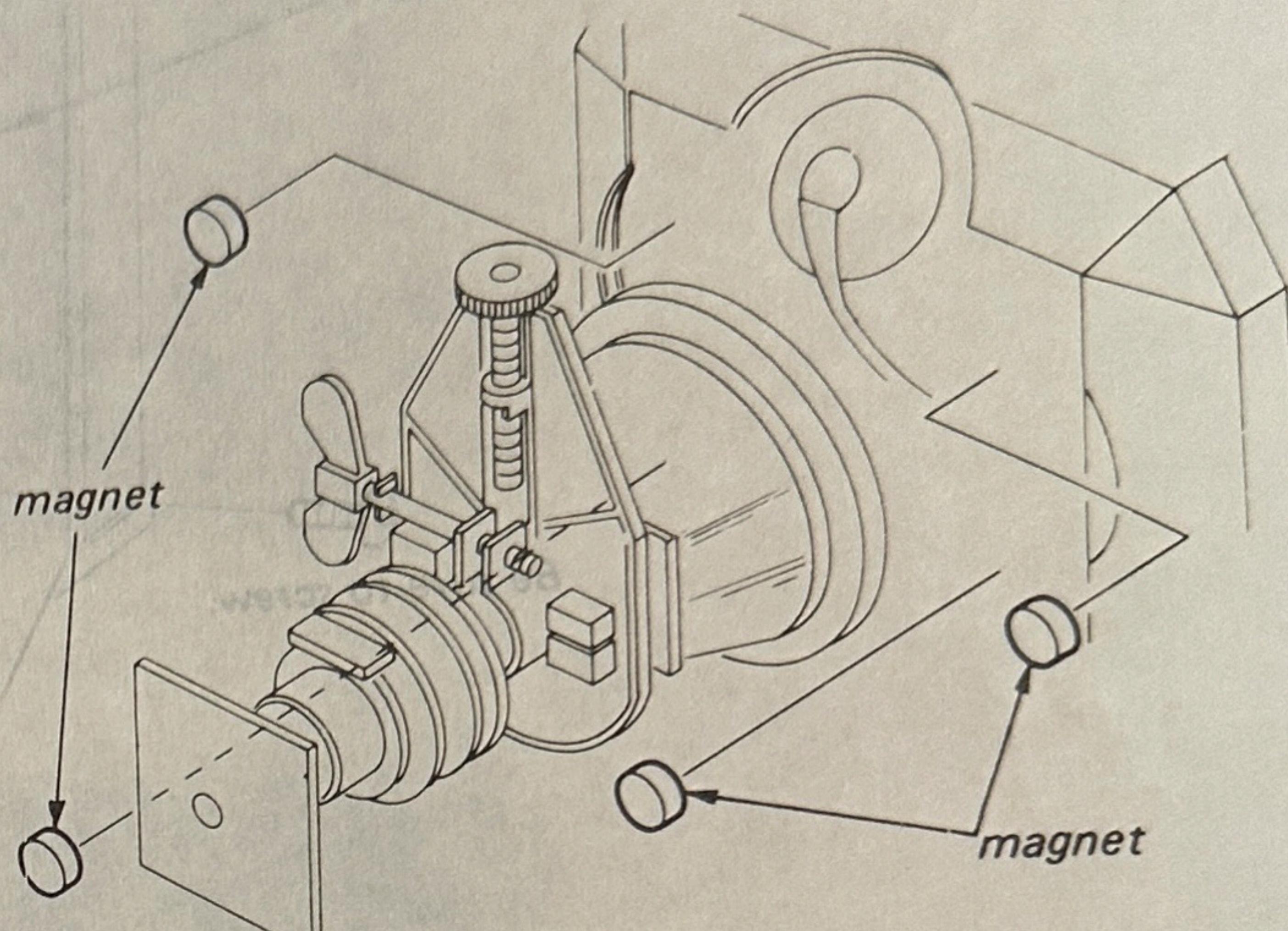


Fig. 3.

4. Slide the deflection yoke as far forward as it will go so that it is closely brought into contact with the CRT funnel.
5. Get a uniform red screen. (Turn off S12 and S13, and then turn on S11.)
6. Adjust the purity control so that the vertical red band is located in the center of the screen as shown in Fig. 2.

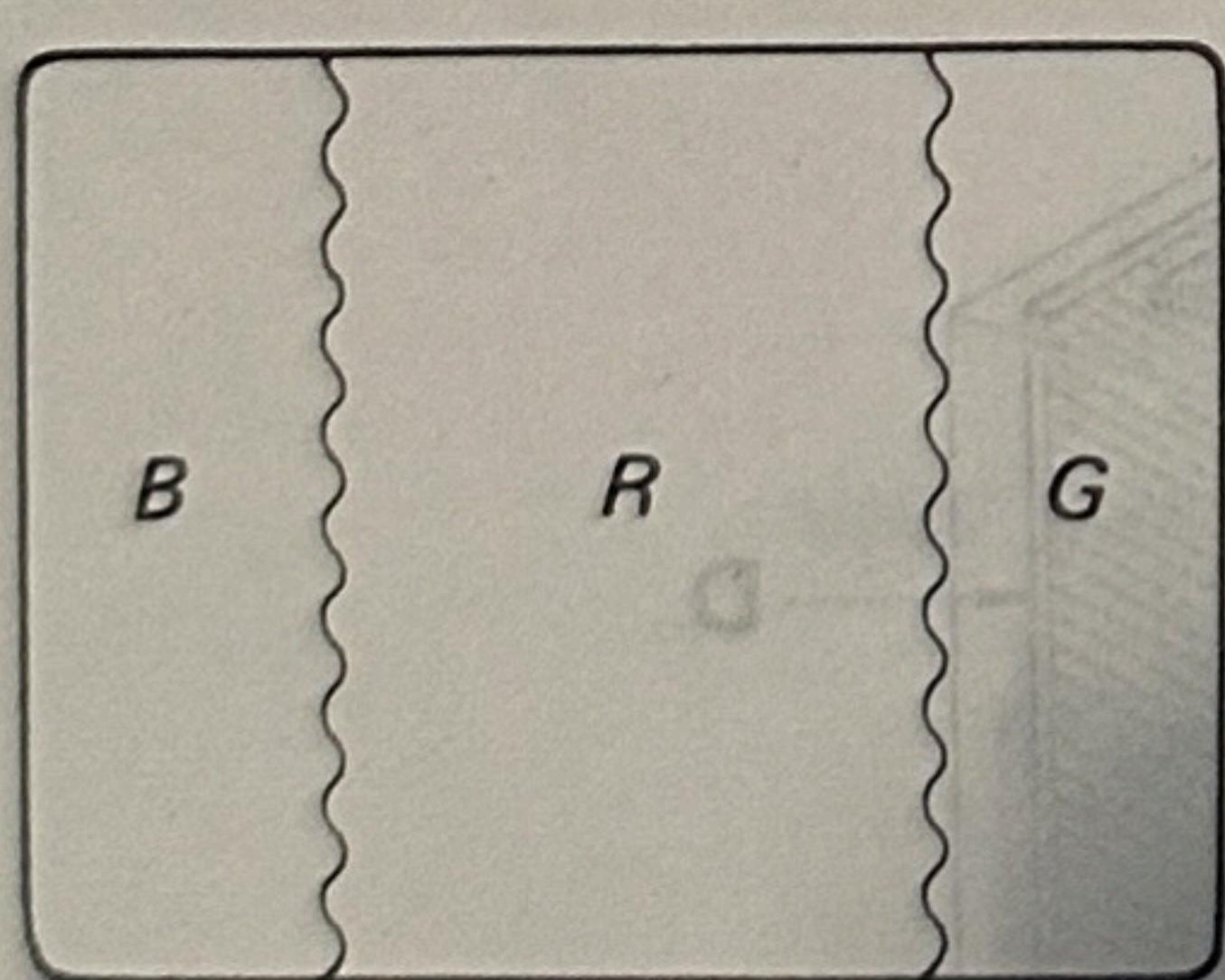


Fig. 2.

2. When the magnets are affixed at corners, degauss the front side of CRT by using a DEGAUSS switch.

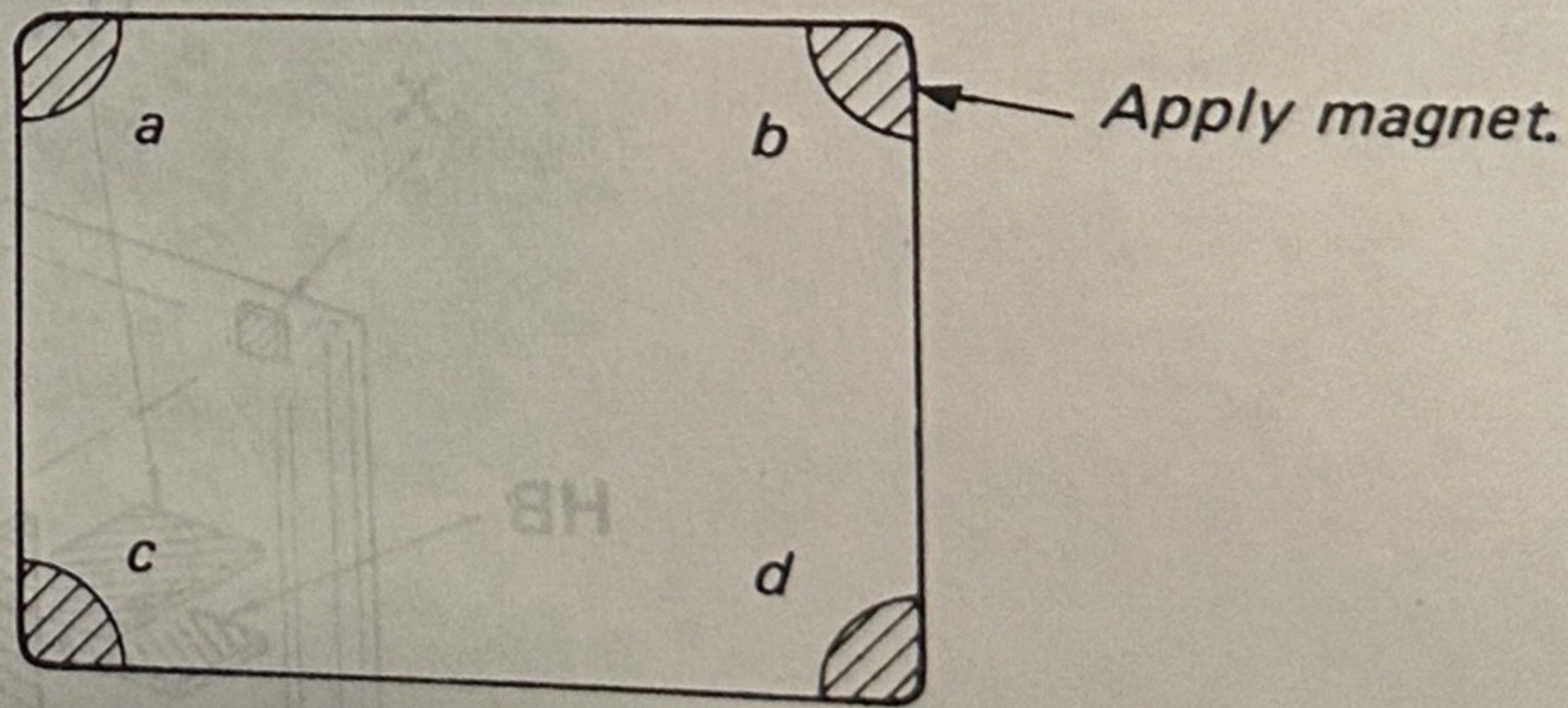


Fig. 4.

2-2. FOCUS ADJUSTMENT

1. Feed in the dot pattern.
2. Adjust the FOCUS VR (RV718) on the C board so that the optimum point of FOCUS is located in the center of the screen.

2-3. CONVERGENCE ADJUSTMENT

Preparations:

1. Feed in the dot pattern.
2. Set the CONTRAST and BRIGHT VRs at the visible dot position.

1. Static Convergence

• Horizontal Static Convergence

1. Adjust the H.STAT so that the horizontal R and G are converged on the center of the screen.
2. If the horizontal B slips in the same direction over the entire screen, move the BMC magnet in the direction indicated by the arrow (a) in Fig. 5 so as to converge R, G and B. (HMC compensation)

• Vertical Static Convergence

1. Adjust the V.TILT VR (RV515) on the V board so that the vertical R and G are converged on the center of the screen.
2. If the vertical B slips in the same direction over the entire screen, turn the BMC magnet in the direction indicated by the arrow (b) in Fig. 5 so as to converge R, G and B. (VMC compensation)

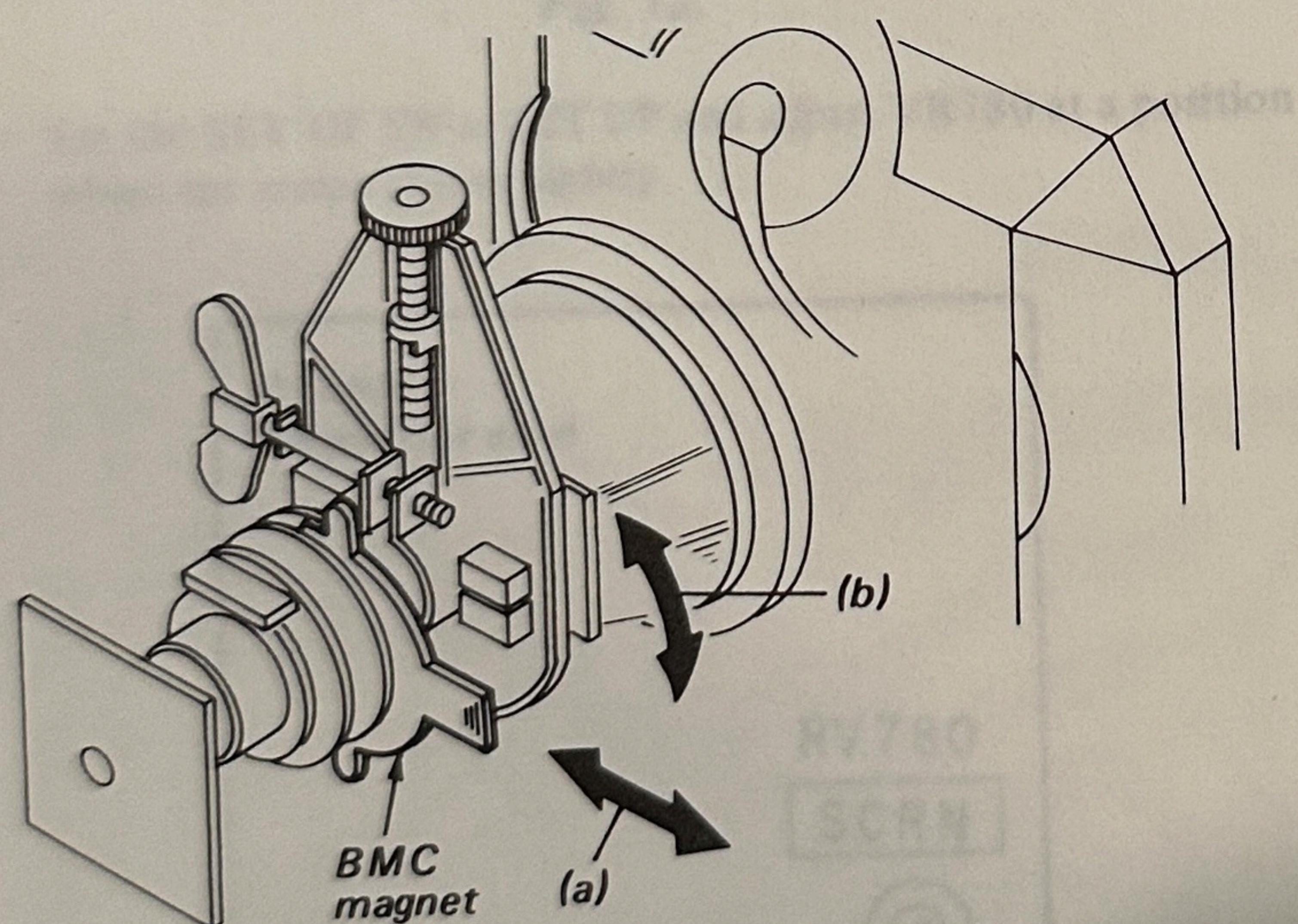


Fig. 5.

Note:

1. The HMC and VMC compensations are influenced each other, so be sure to repeat the adjustment several times.
2. There may be an insufficient focus during HMC and VMC compensations, so perform the focus adjustment.

2. Dynamic Convergence

- Adjust the VRs on the D board as follows:

H AMP

Adjust RV7 so that L1 is equal to L2 or L2 to L3.

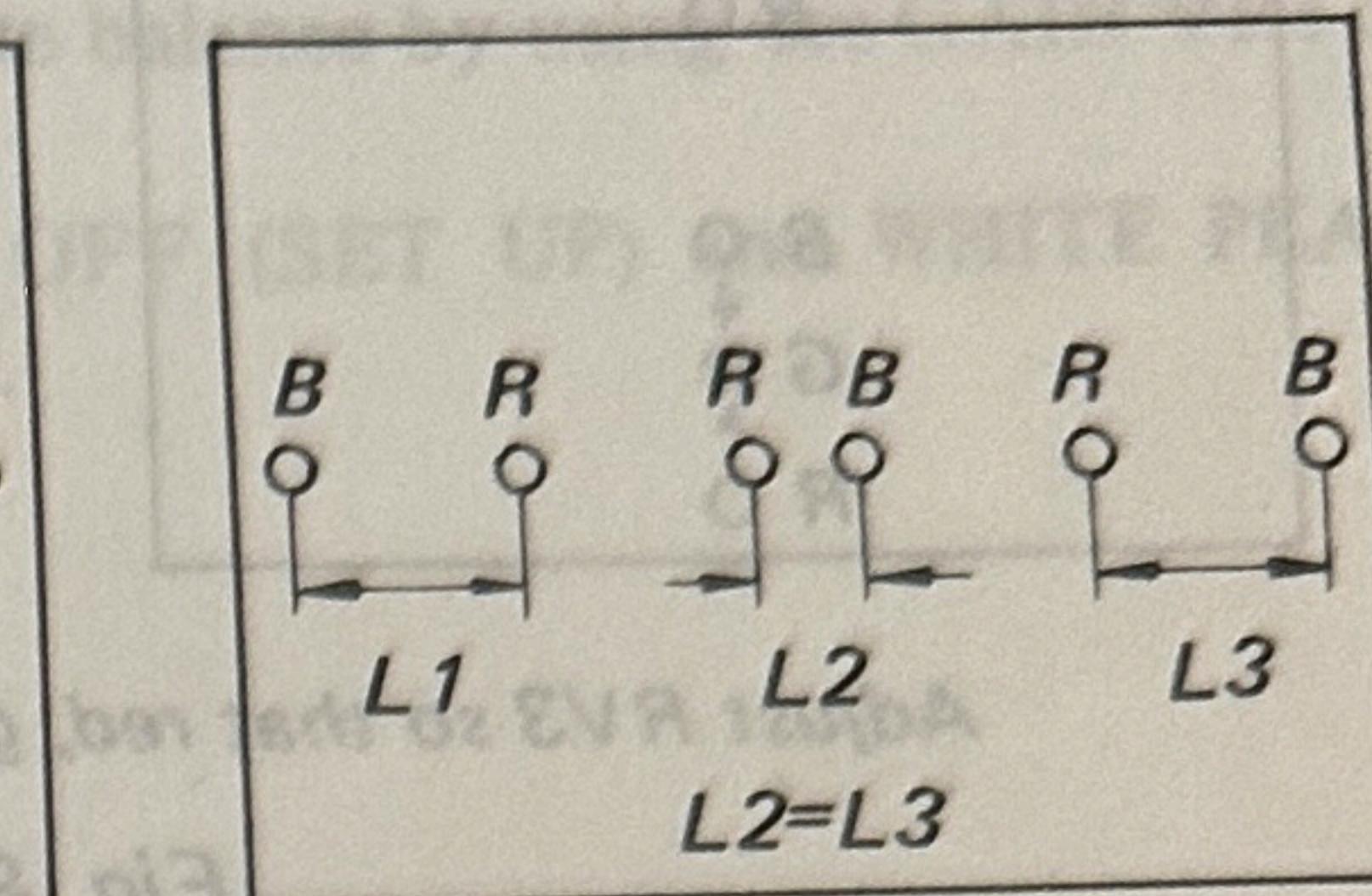
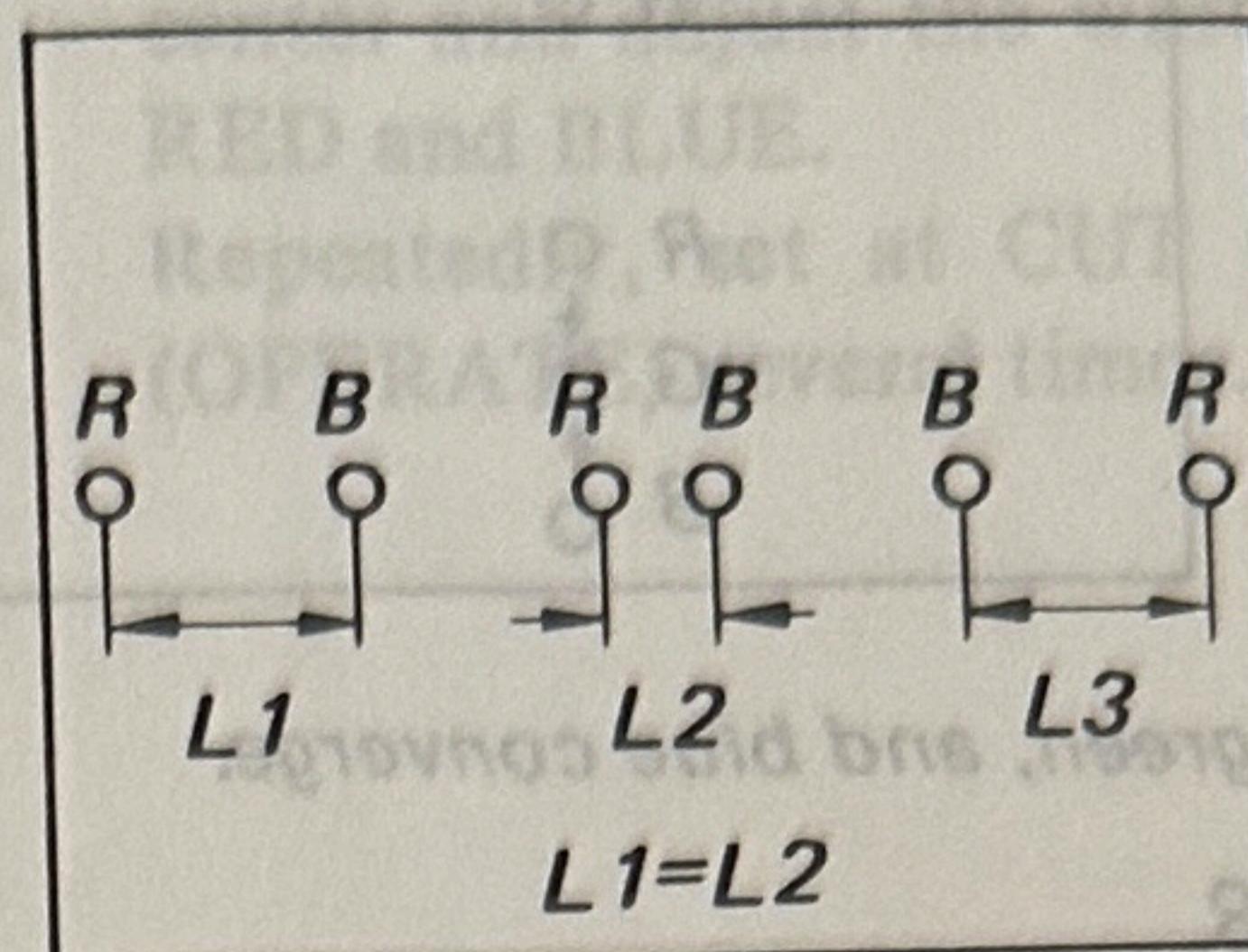


Fig. 6.

H TILT

Adjust RV8 for the convergence of red, green and blue.

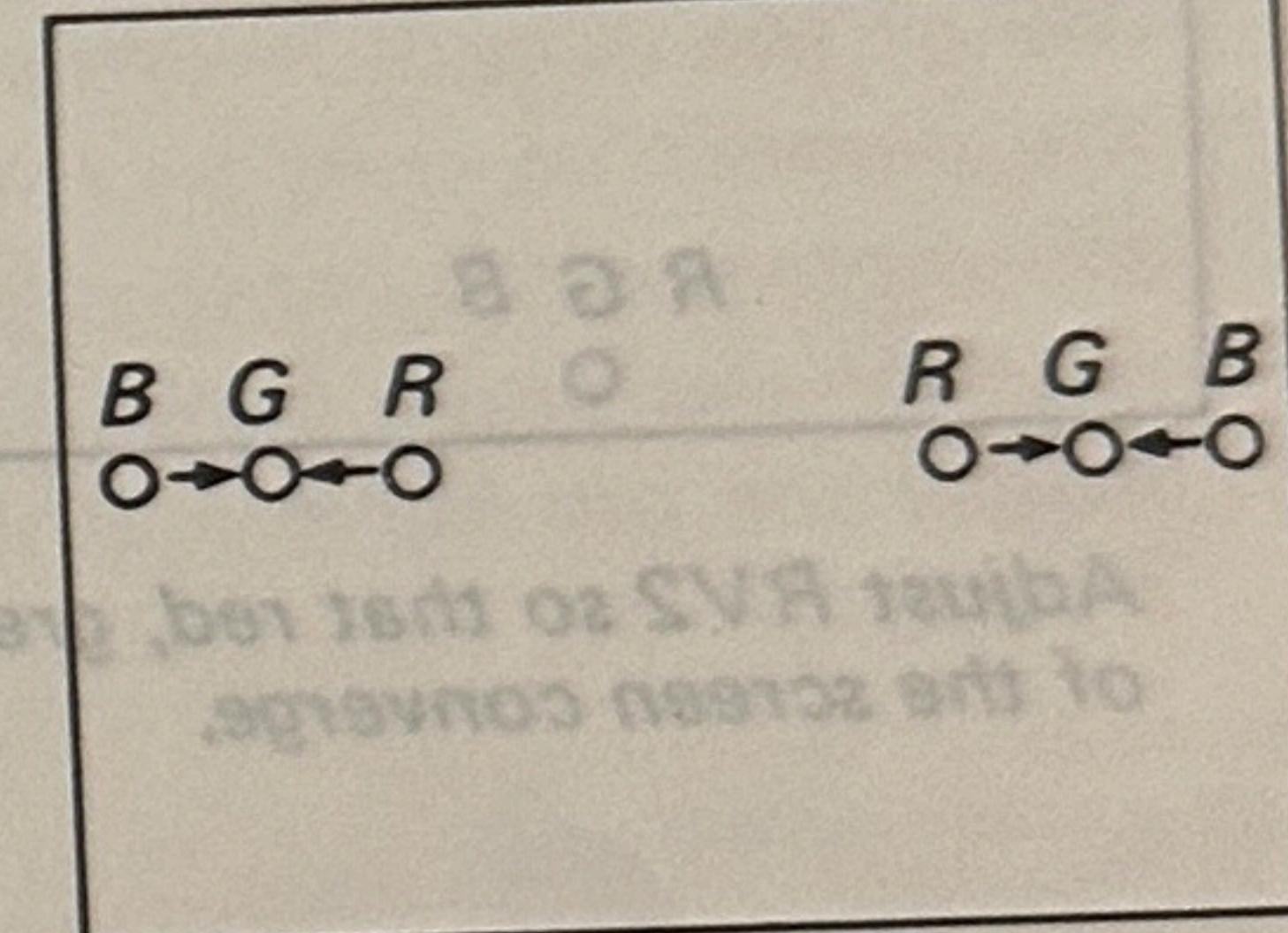
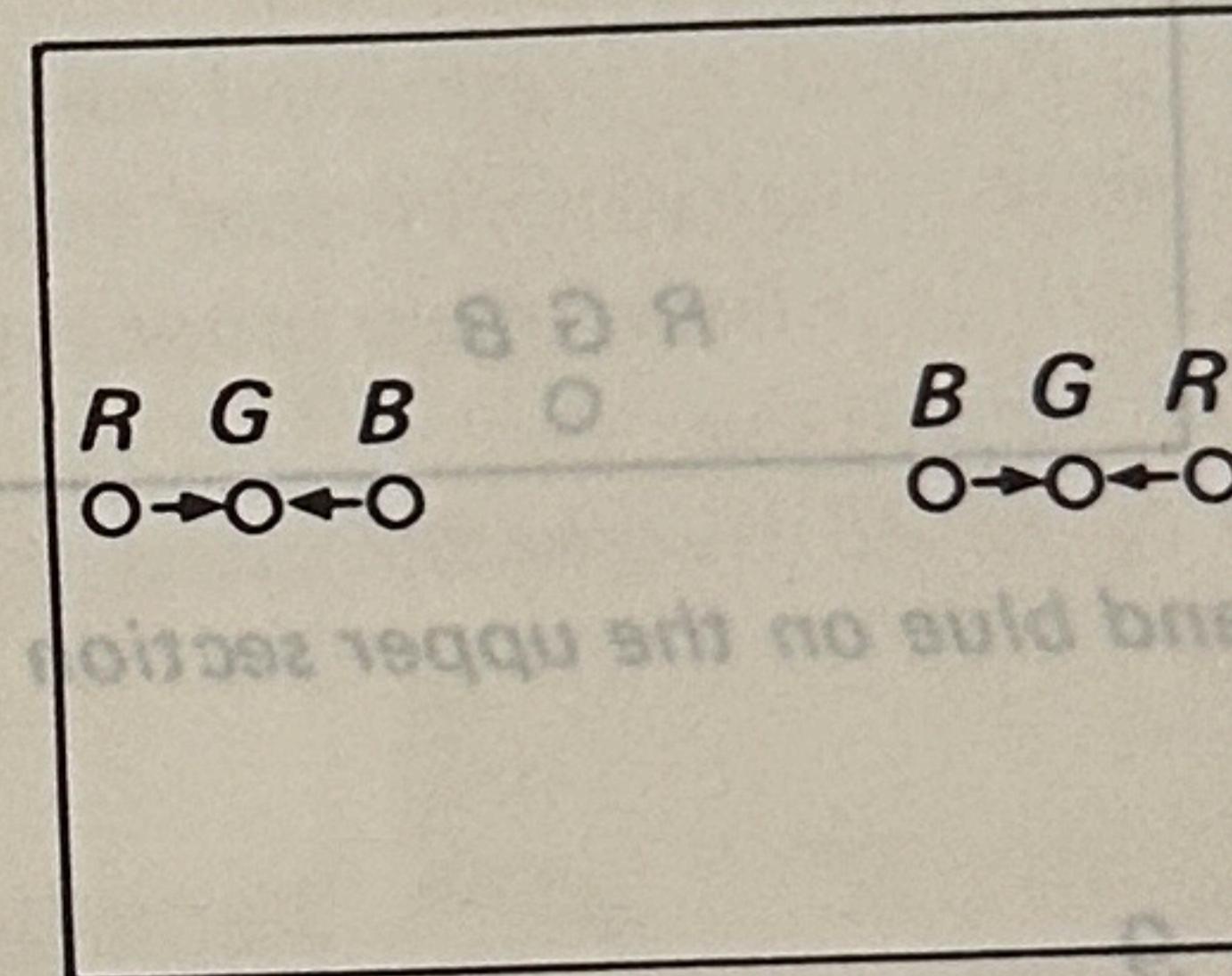
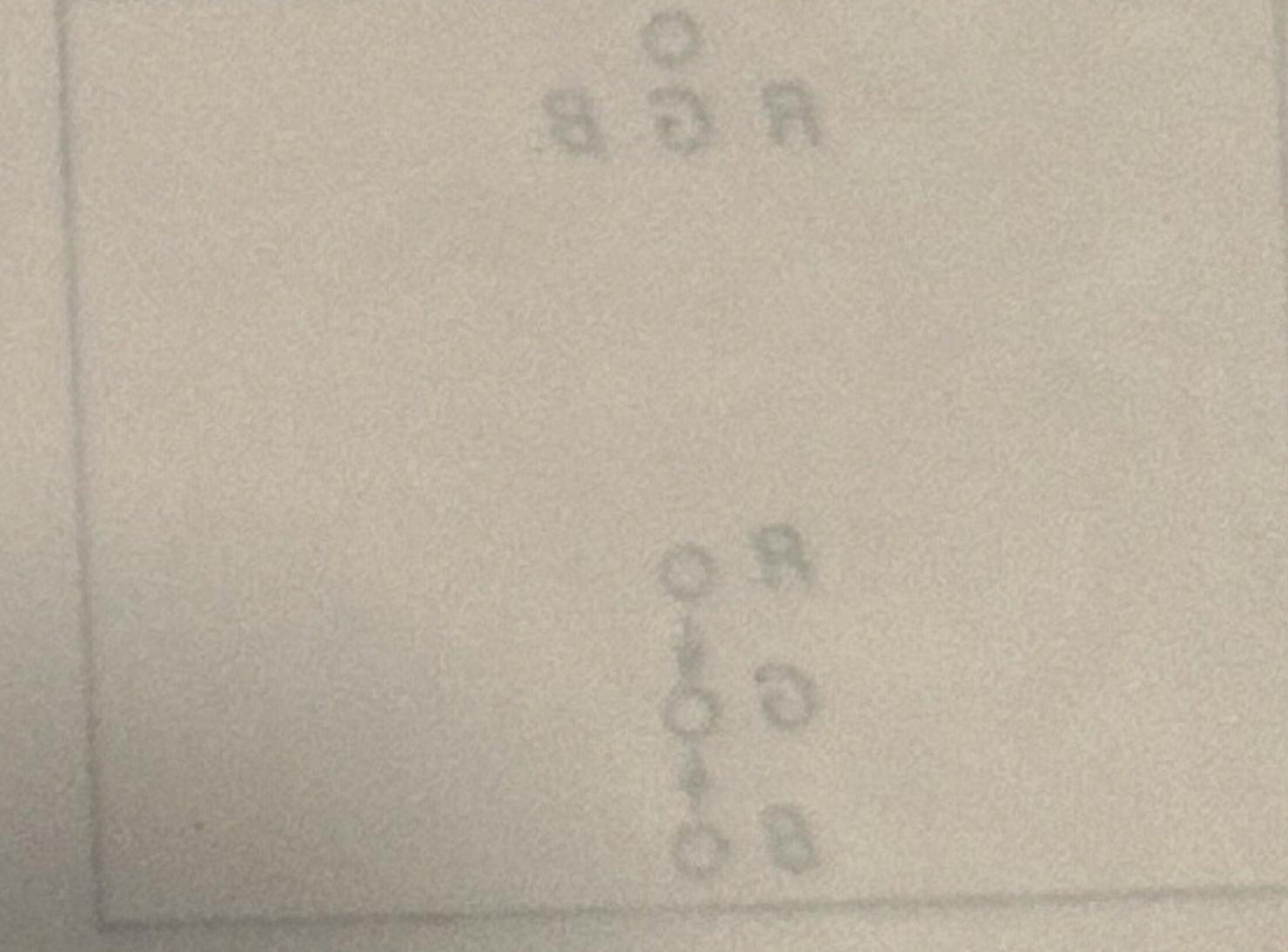
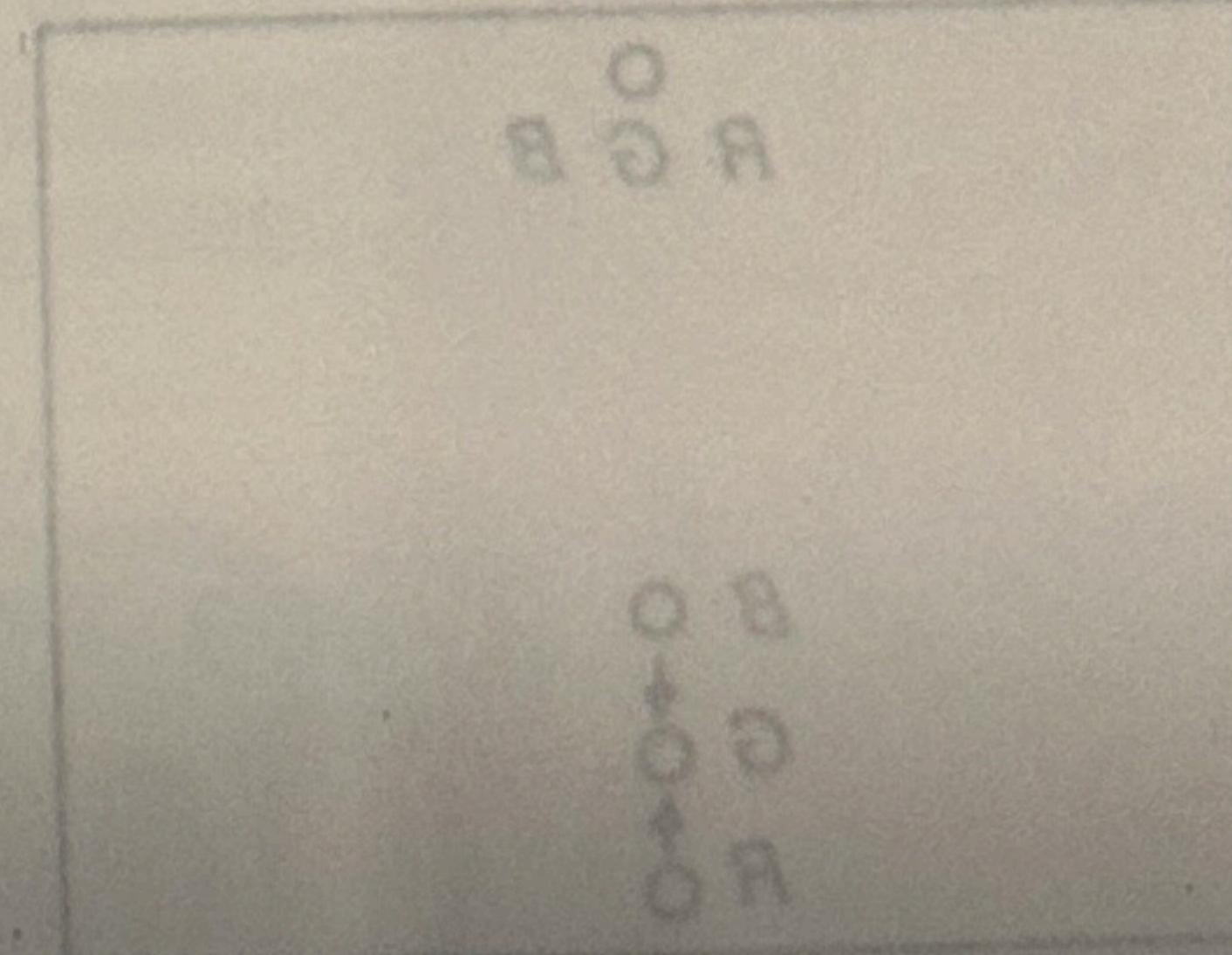
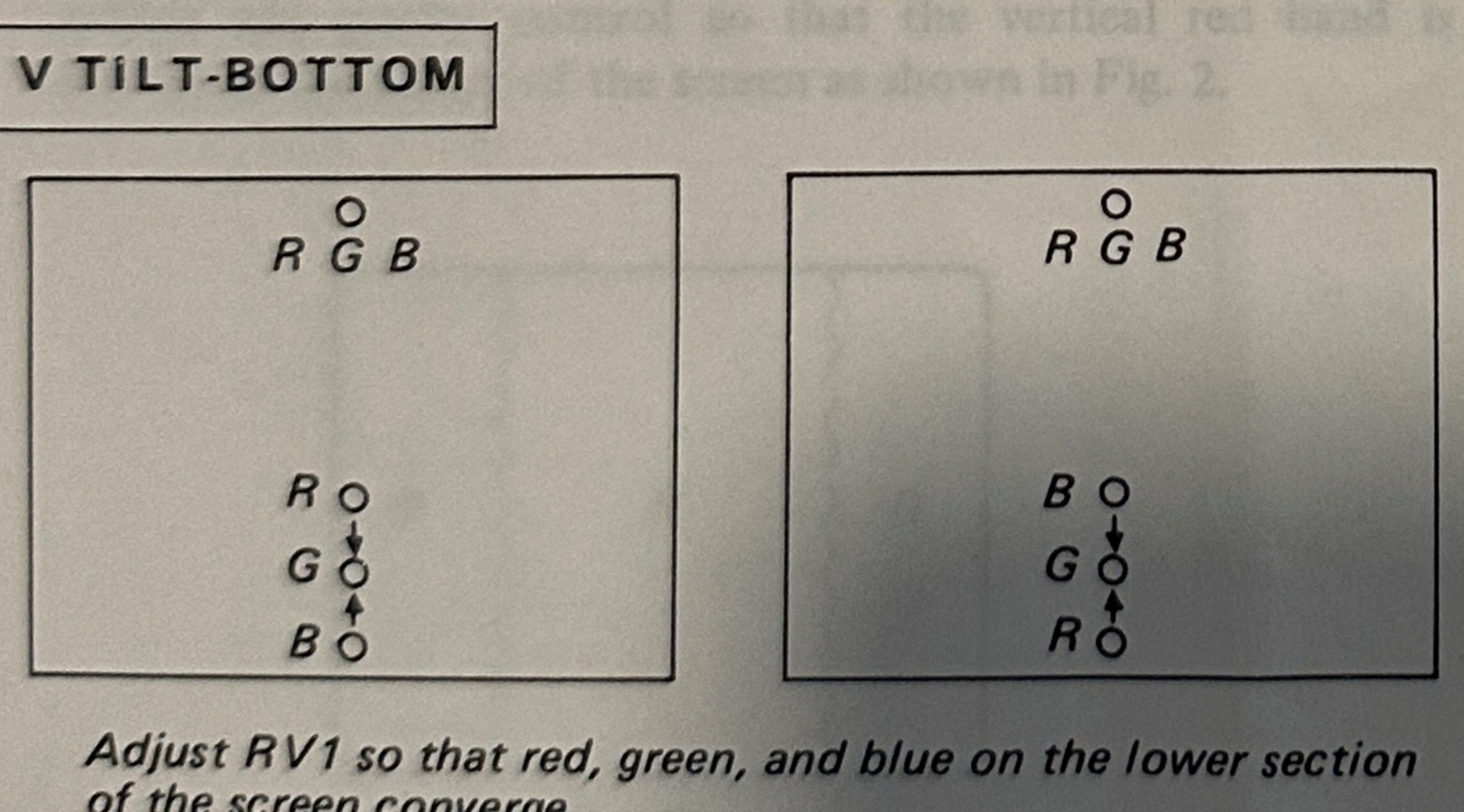
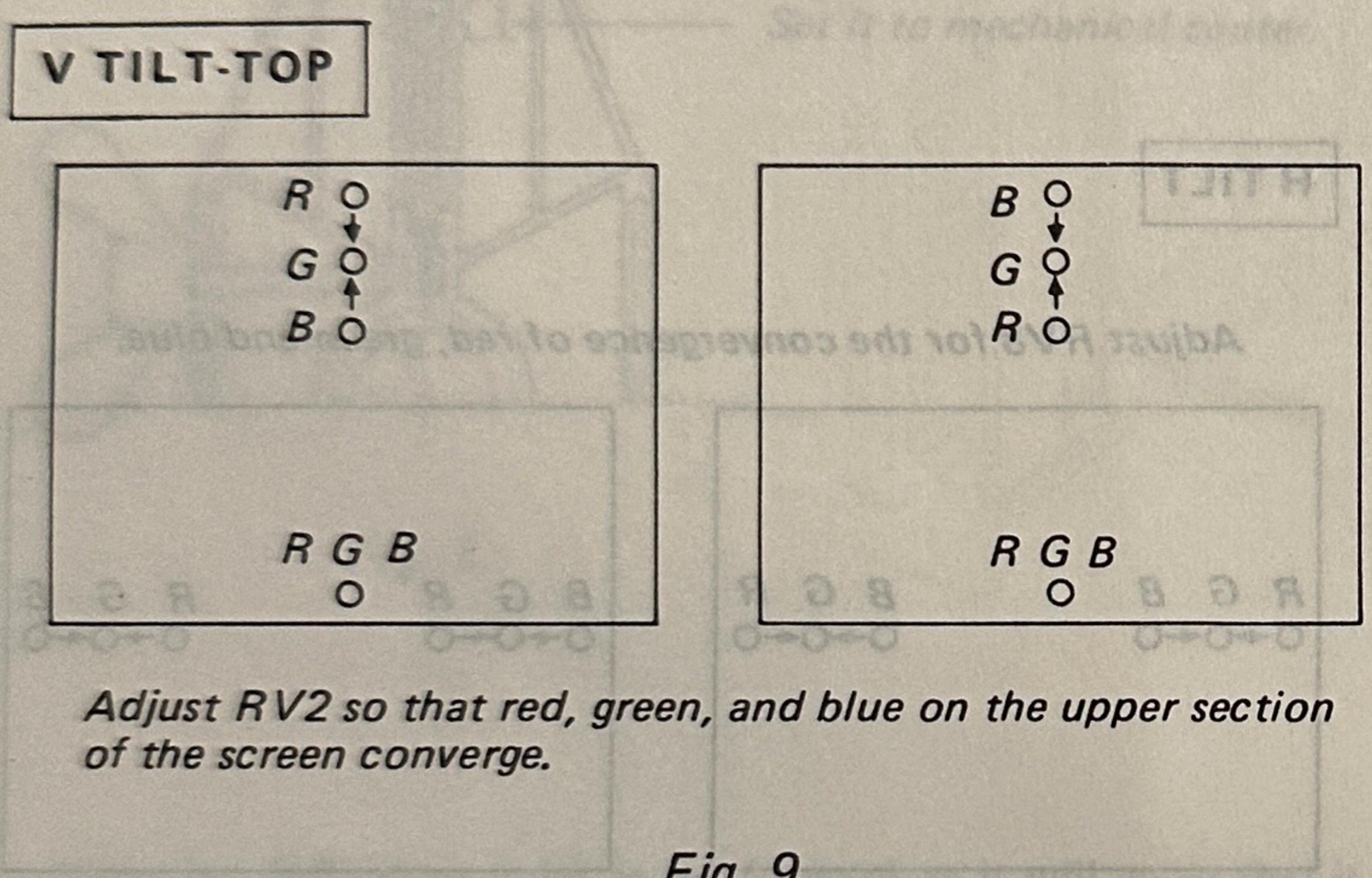
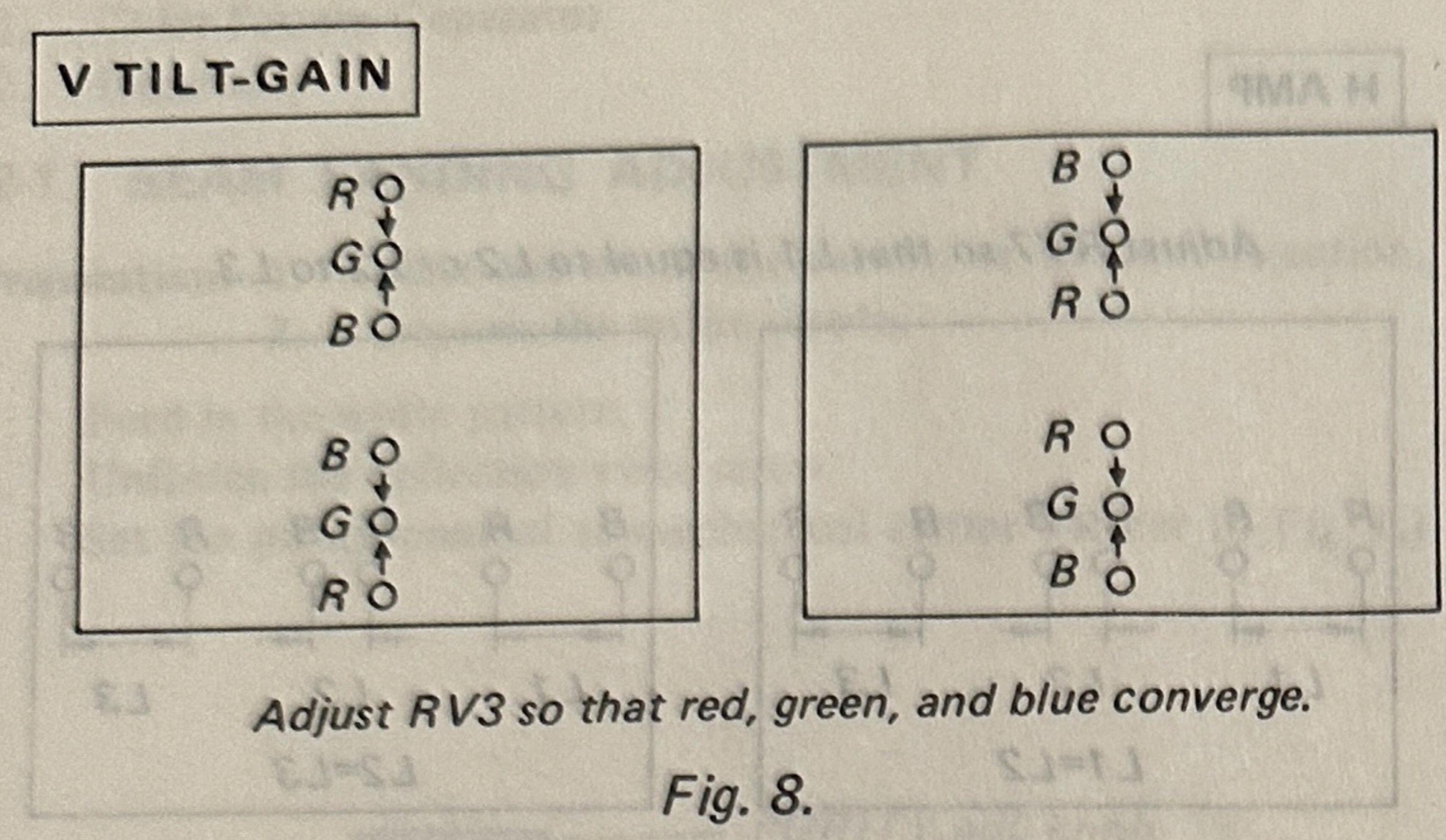


Fig. 7.

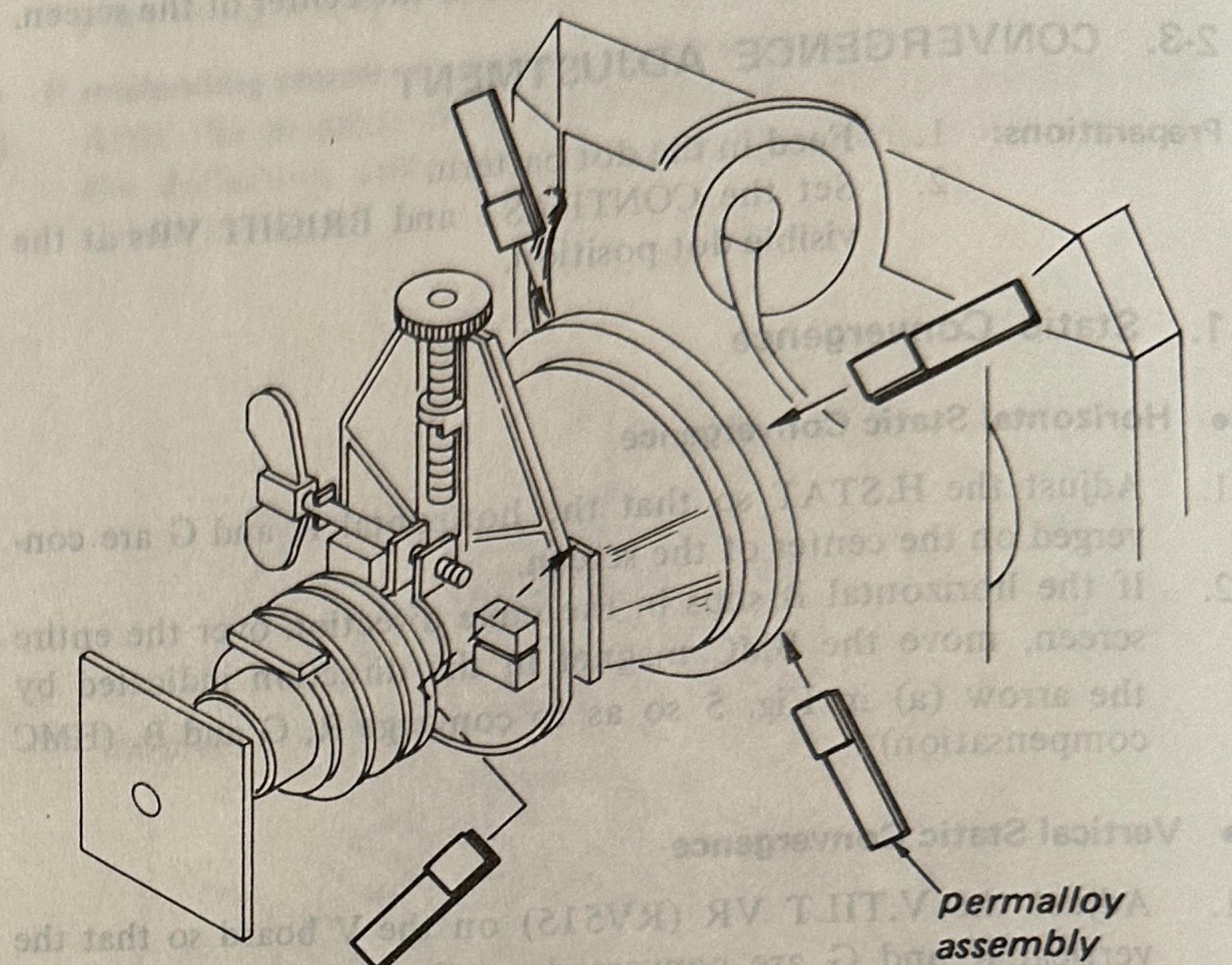


Adjust RV8 so that the upper section of the screen converges to the lower section.

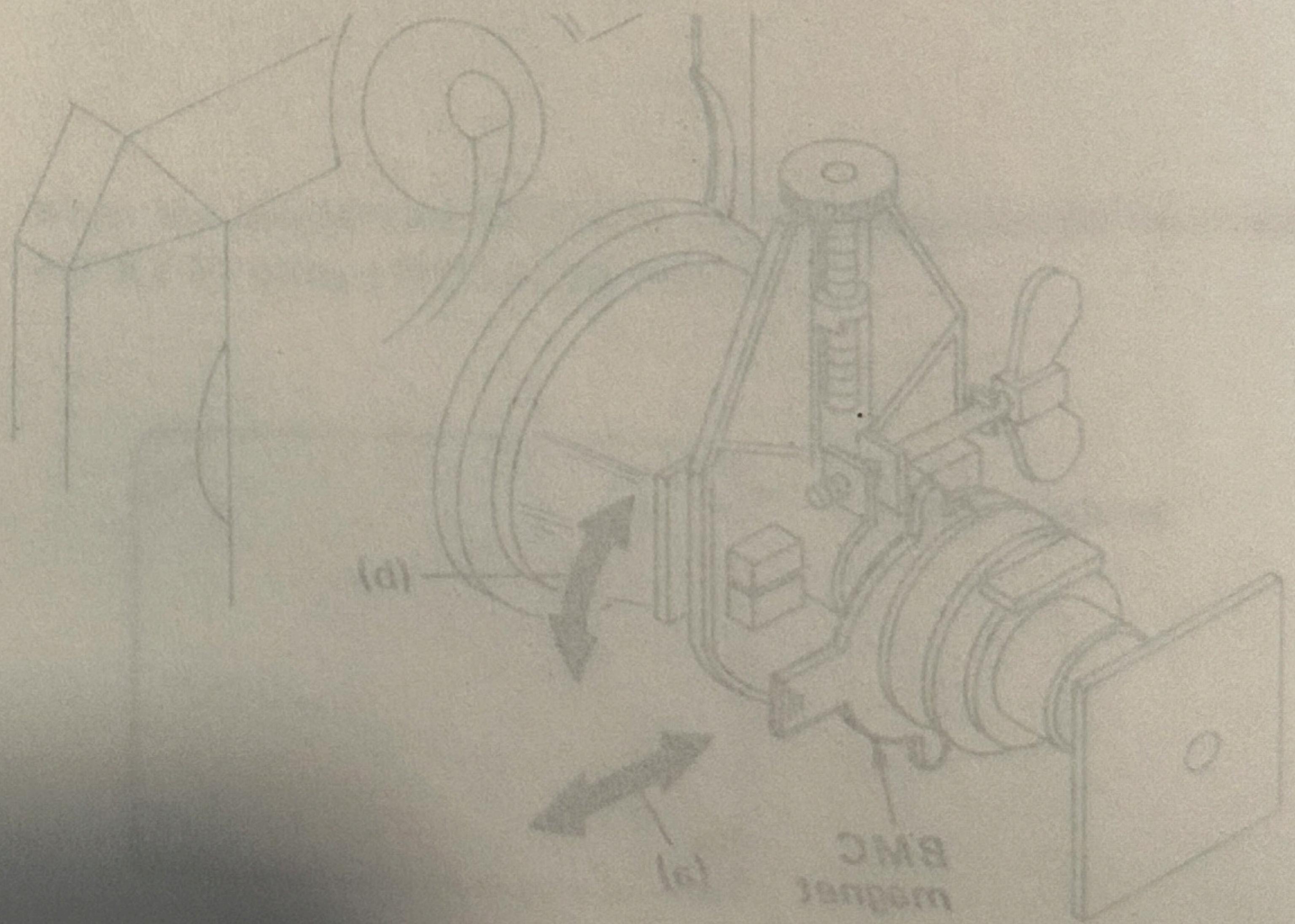
- Adjust the V TILT-GAIN (RV514), V TILT-TOP (RV512) and V TILT-BOTTOM (RV513) on the V board, respectively.



- If misconvergence appears at corners of the screen, Affix the permalloy Ass'y between the deflection yoke and funnel corresponding to the misconverged corners, as shown in Fig. 12.



Note: After the landing and convergence adjustments are completed, fix the purity magnet and BMC magnet by using the white paint.



2-4. WHITE BALANCE ADJUSTMENT

1. Feed in the white pattern.
2. Connect the R, G and B cathodes of CRT to +B 95 line (D3 connector pin 1 on the D board) by using a clip cord.

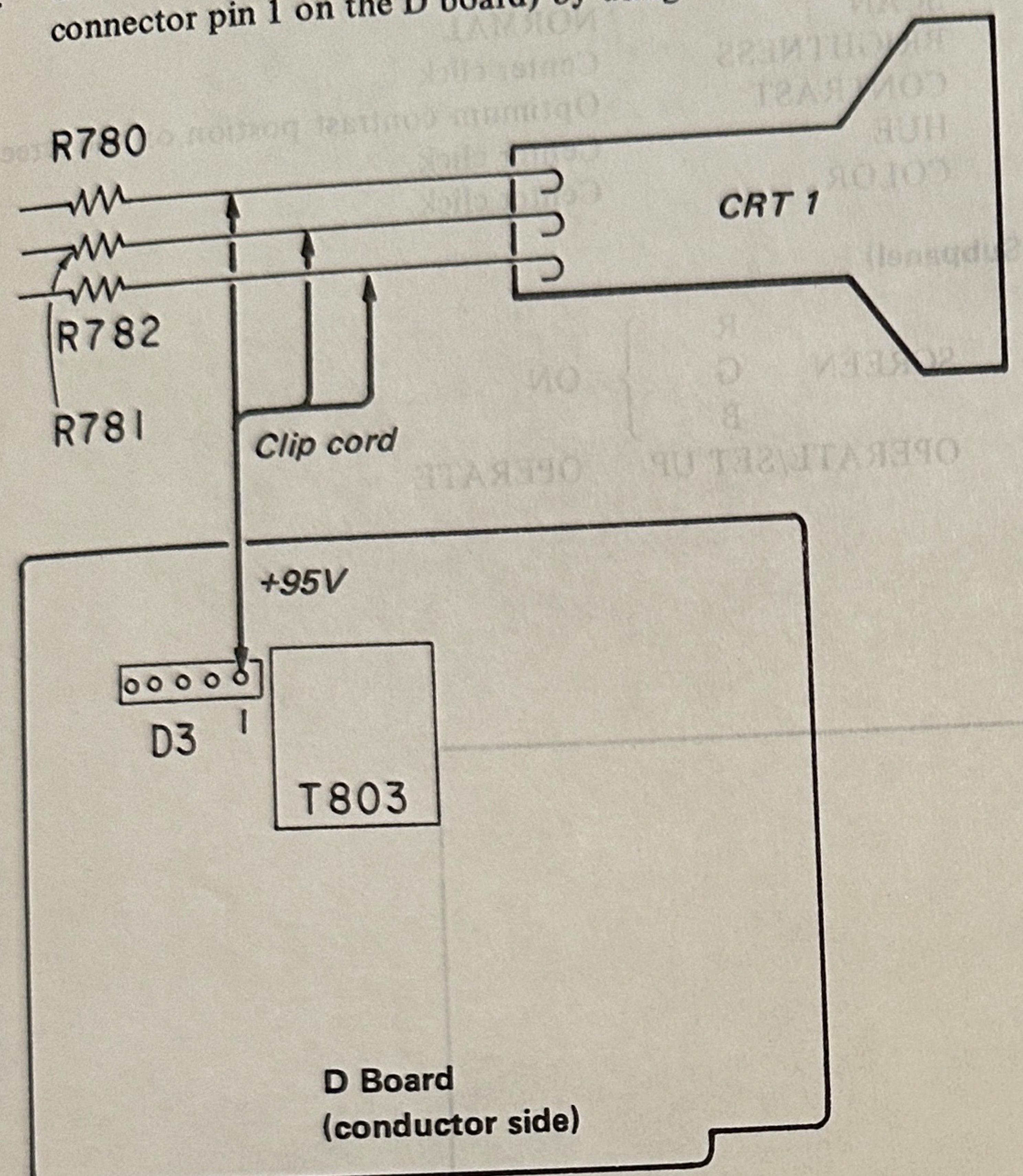


Fig. 12.

3. Set the SET UP SW at SET UP and adjust VR780 at a position where the screen shines slightly.

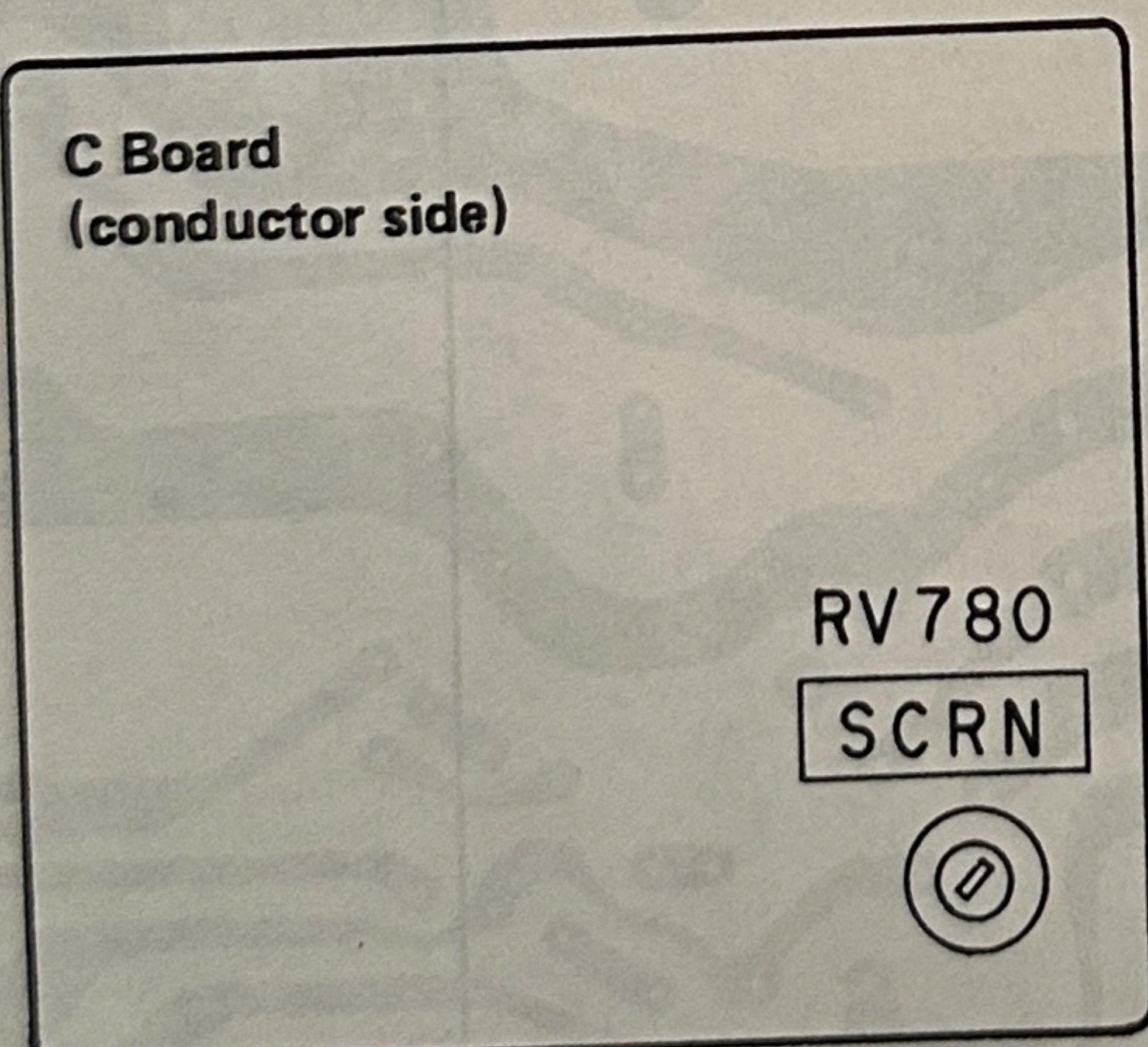


Fig. 13.

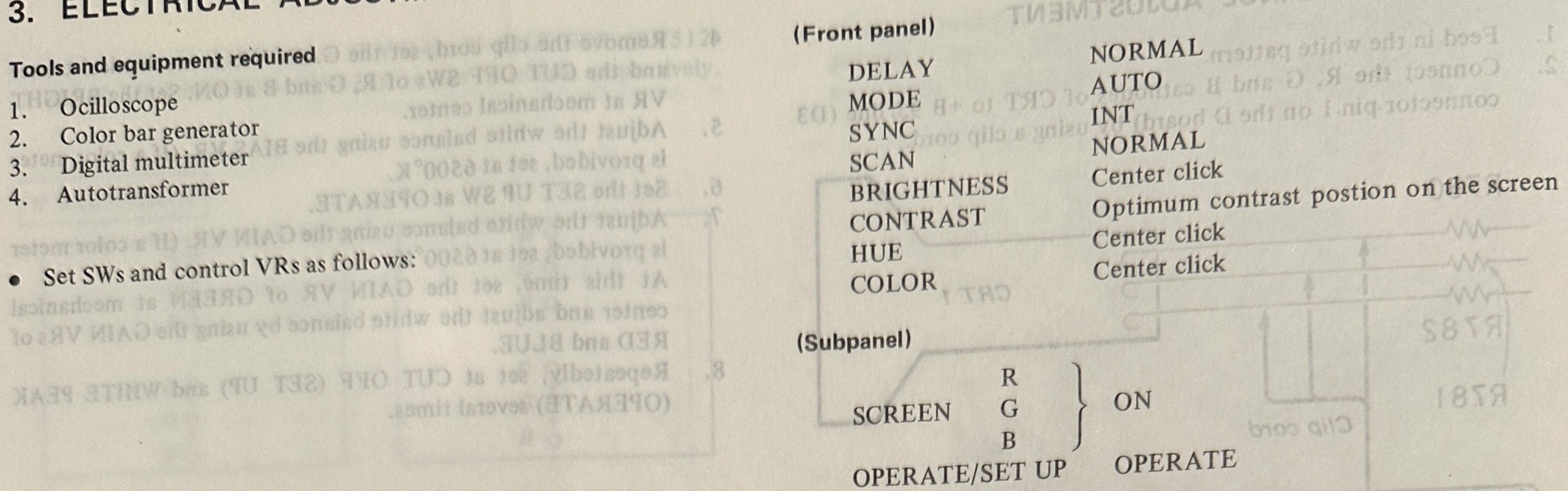
4. Remove the clip cord, set the GAIN VR at mechanical center and the CUT OFF SWs of R, G and B at ON. Set the BRIGHT VR at mechanical center.
5. Adjust the white balance using the BIAS VR. (If a color meter is provided, set at 6500°K).
6. Set the SET UP SW at OPERATE.
7. Adjust the white balance using the GAIN VR. (If a color meter is provided, set at 6500°K). At this time, set the GAIN VR of GREEN at mechanical center and adjust the white balance by using the GAIN VRs of RED and BLUE.
8. Repeatedly, set at CUT OFF (SET UP) and WHITE PEAK (OPERATE) several times.

3. ELECTRICAL ADJUSTMENT

Tools and equipment required

1. Oscilloscope
2. Color bar generator
3. Digital multimeter
4. Autotransformer

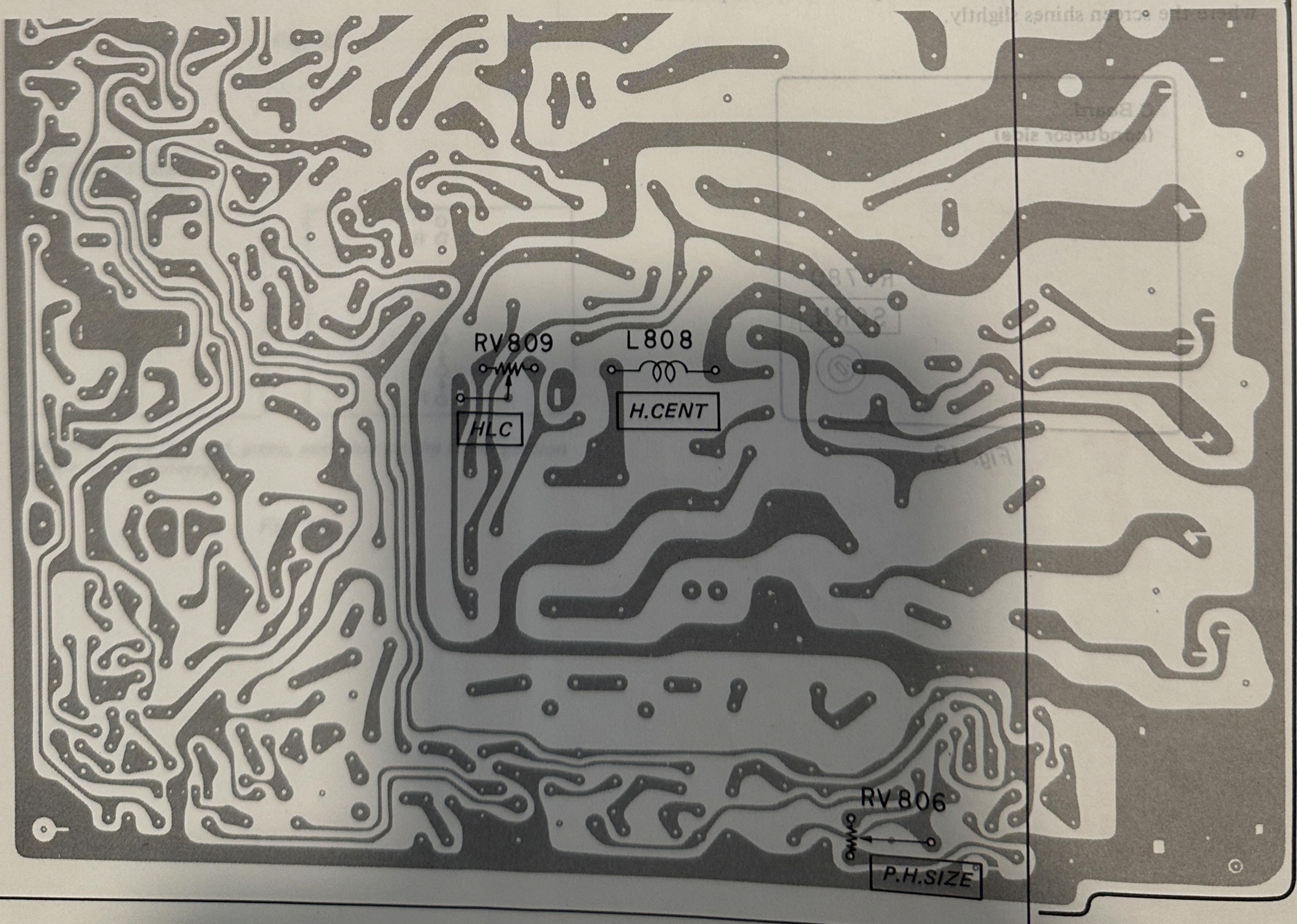
- Set SWs and control VRs as follows:



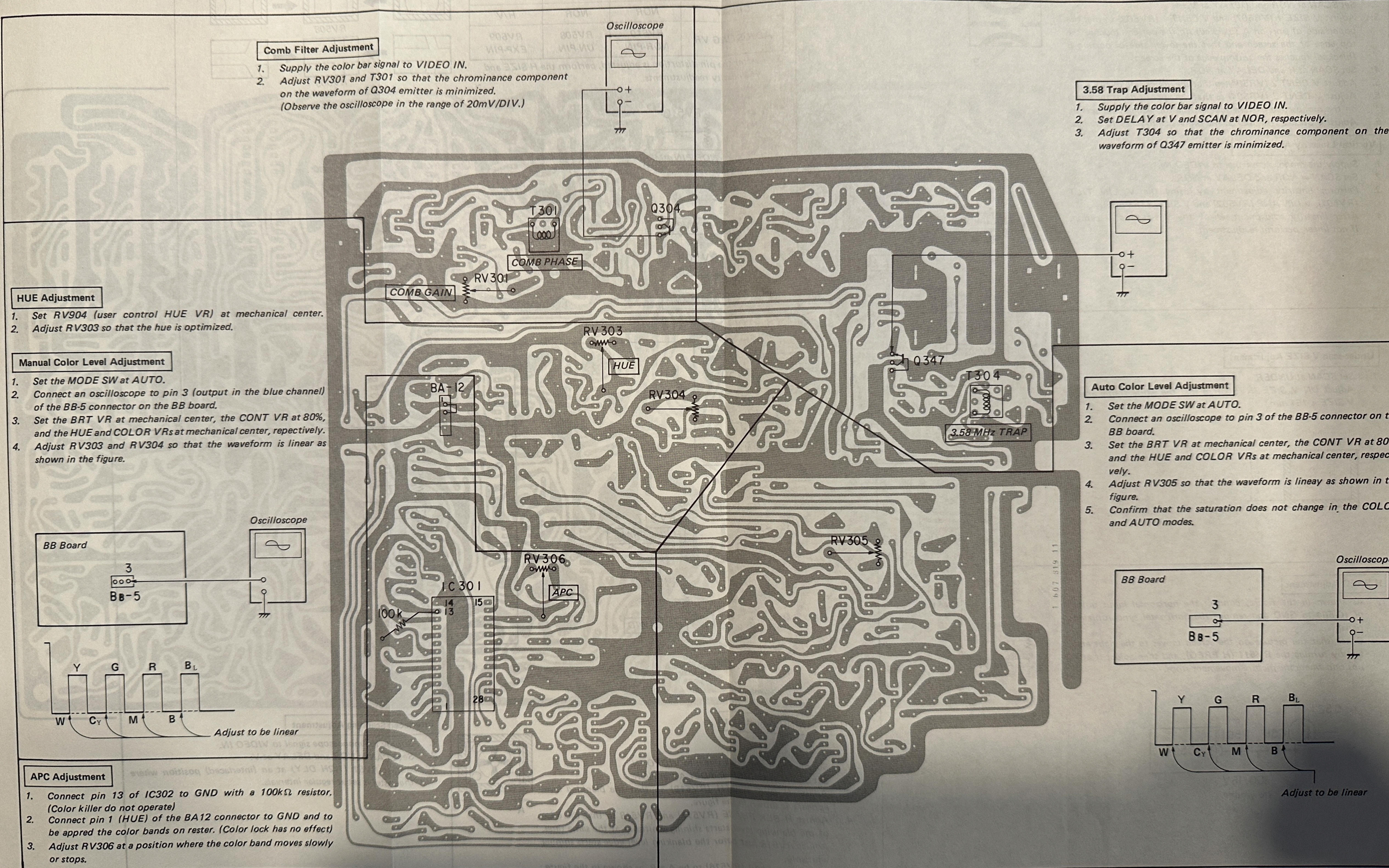
3-1. D BOARD ADJUSTMENT

Adjustment of Horizontal Width, Linearity and H CENTER

1. Supply the monoscope signal to VIDEO IN.
2. Set SCAN at NOR and DELAY at NOR.
3. Adjust H CENT (RV809) so that the center of the monoscope pattern is located in the center of the screen.
4. Adjust the core of H linearity coil (L808) at a position where the number of right and left frames is equally counted from the center of the monoscope pattern at a little more inner one than the maximum horizontal width position.
5. Adjust the pin horizontal width to 15.75 frames by using the RV806.



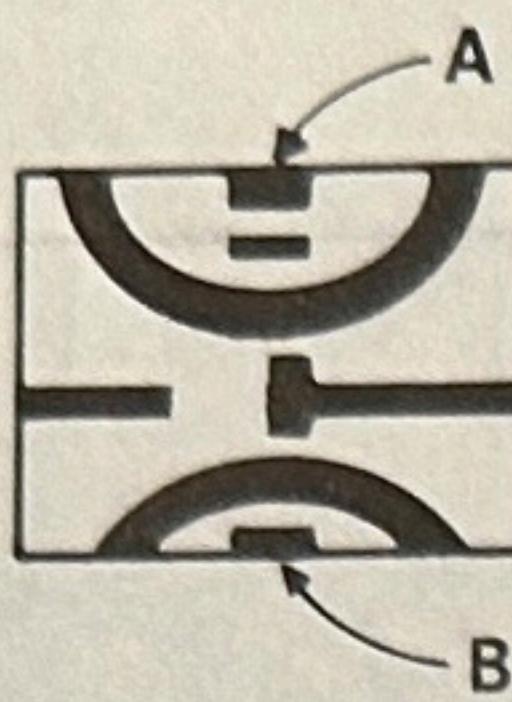
3-2. BA BOARD ADJUSTMENT



3-3. V BOARD ADJUSTMENT

V SIZE and V CENTER Adjustments

- Supply the monoscope signal to VIDEO IN.
- Set SCAN at NOR and DELAY at V.
- Adjust V SIZE 1 (VR507) and V CENT 1 (RV503) so that the upper side of portion A (blacked) on the pattern touches the top edge of the screen and that the lower side of portion B (blacked) touches the bottom edge of the screen.
- Set SCAN at R and DELAY at NOR.
- Adjust V CENT 2 (VR504) so that the upper side of the
- Adjust V CENT 2 (VR504) so that the upper side of the hatch on the monoscope pattern touches the top edge of the screen.
- Adjust V SIZE 2 (RV505) so the the V size touches 12 frames.

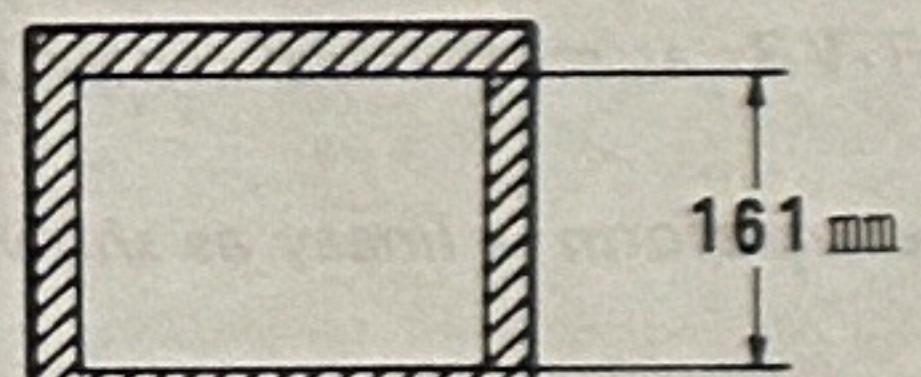


Vertical Linearity Adjustment

- Supply the monoscope signal to VIDEO IN.
- Set SCAN at NOR and DELAY at NOR.
- Perform linearity adjustment by using the V LIN TILT (RV501), V LIN AMP (RV502) and V SIZE 2 (RV505).
- After linearity adjustment, check the V size and V center. If not linear, perform readjustment.


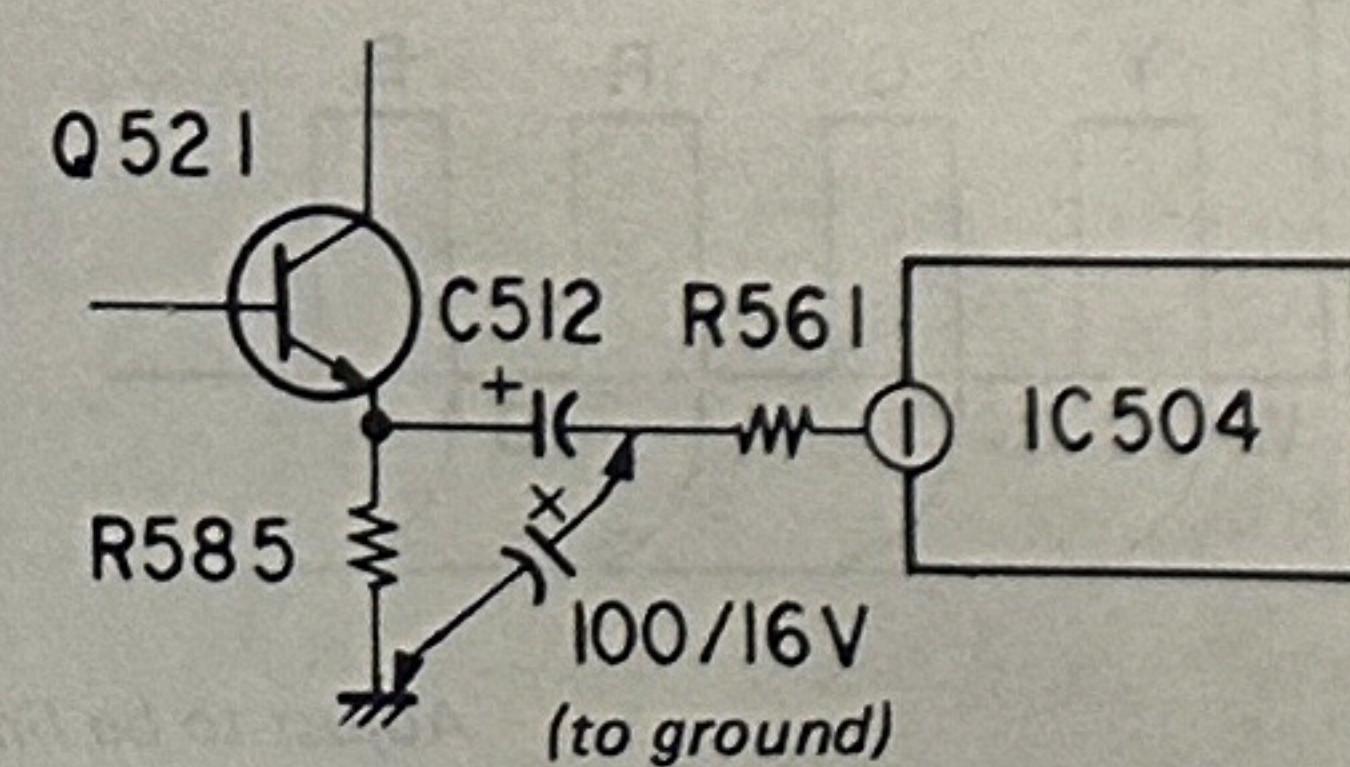
Under-scan V SIZE Adjustment

- Set SCAN at UNDER.
- Adjust UN V SIZE (RV506) so that the white frame area of V SIZE is 161 mm.



H FREQ Adjustment

- As shown in the figure, connect the horizontal input pulse of IC-504 to GND and remove the horizontal synchronizing signal.
- Check that the picture on the screen moves to the right and left by turning the RV511 (H FREQ), and then adjust it at a position where the picture movement stops.

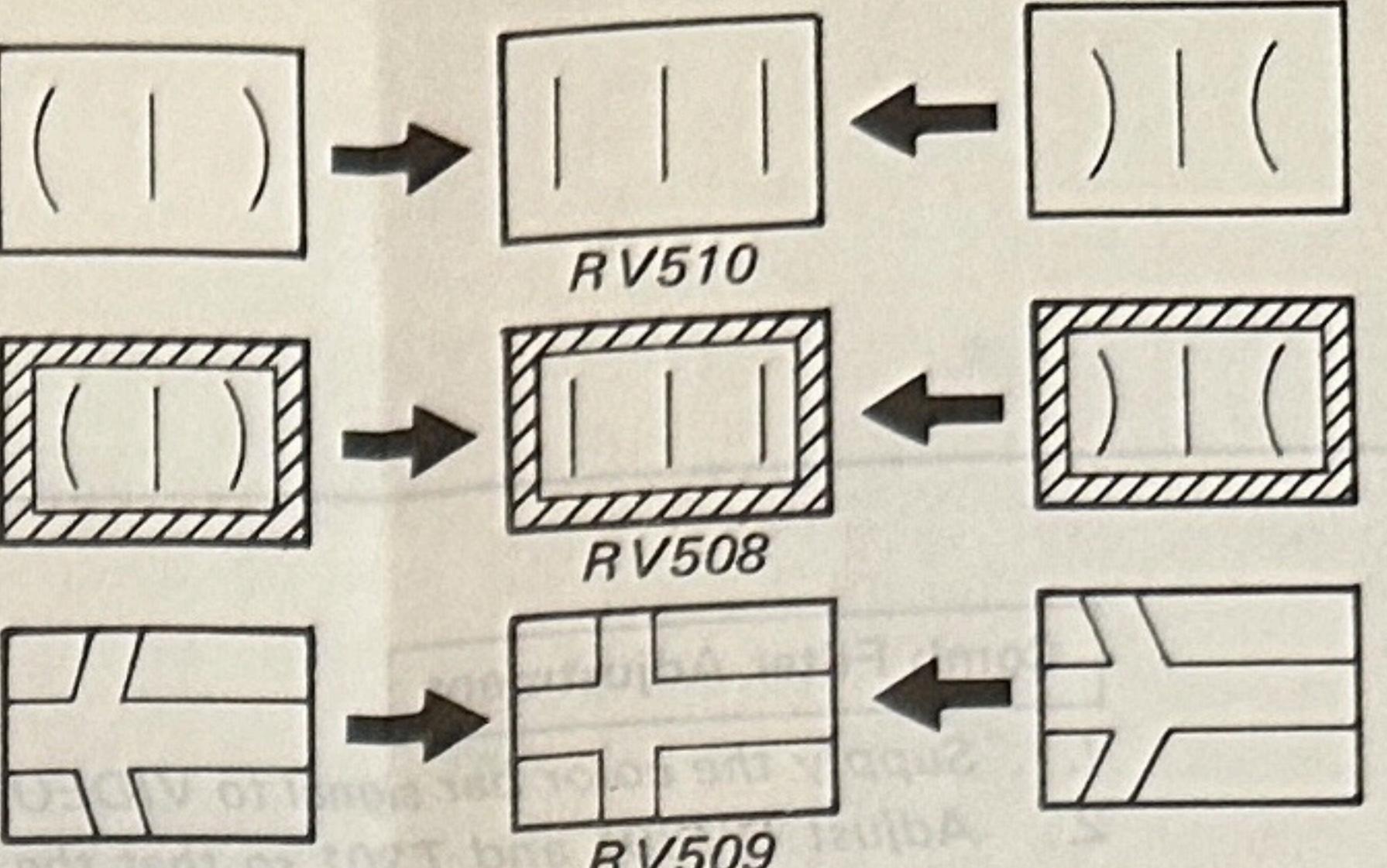


Pin Distortion Adjustment

- Supply the monoscope signal to VIDEO IN.
- Adjust so that the vertical lines of both edges are linear in the following modes.

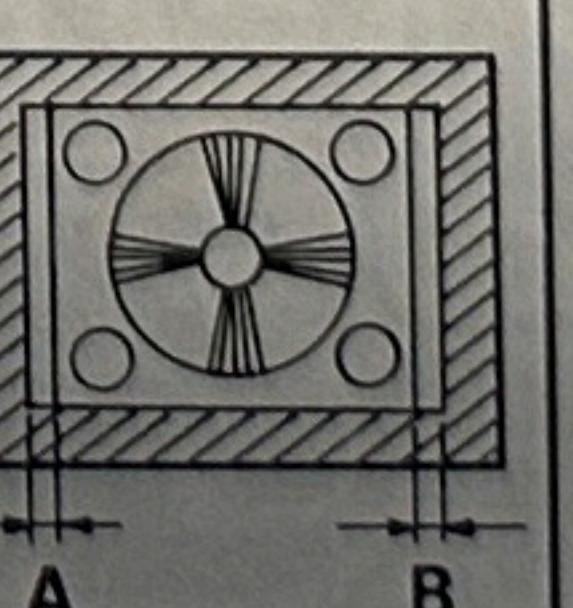
SCAN	NOR	UNDER	NOR
DELAY	NOR	NOR	H/V
ADJUSTING VR	RV510	RV508	RV509
	NOR-PIN	UN-PIN	EXP-PIN

- After the pin distortion is adjusted, perform the H SIZE and H linearity readjustments.



H BLANKING Adjustment

- Supply the monoscope signal to VIDEO IN.
- Set SCAN at NOR and DELAY at NOR.
- Adjust H BLK WIDTH (RV518) so that the blanking level appears as shown in the figure.
- Adjust H BLK PHASE (RV517) and RV518 so that the edge of the blanking level starts shining whitish at the same time.
- Adjust RV518 just before the blanking level edge starts shining whitish.
- Adjust H PHASE (RV516) to be A = B, as shown in the figure.



Interlaced Scanning Adjustment

- Supply the monoscope signal to VIDEO IN.
- Set SCAN at NOR and DELAY at V.
- Adjust RV51 (1/2H DLY) at an (interlaced) position where the raster is set at regular intervals.